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respective ones of the at least one server, wherein at least one address for retrieving the created on-line information segments is provided to the address server for sending to the viewer in respective specified timing relationship with the video programming.

In the Abstract:

Please replace the abstract on page 47 with the following rewritten paragraph:

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-- A system for integrating video programming with the vast information resources of the Internet. A computer-based system receives a video program with embedded uniform resource locators (URLs). The URLs, the effective addresses of locations or Web sites on the Internet, are interpreted by the system and direct the system to the Web site locations to retrieve related Web pages. Upon receipt of the Web pages by the system, the Web pages are synchronized to the video content for display. The video program signal can be displayed in a video window on a conventional personal computer screen. The actual retrieved Web pages are time stamped to also be displayed, on another portion of the display screen, when predetermined related video content is displayed in the video window. As an alternative, the computer-based system receives the URLs directly through an Internet connection, at times specified by TV broadcasters in advance. The system interprets the URLs and retrieves the appropriate Web pages. The Web pages are synchronized to the video content for display in conjunction with a television program being broadcast to the user at that time. This alternative system allows the URLs to be entered for live transmission to the user. --

REMARKS

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned **"Version with markings to show changes made."**

The Applicants have amended the specification as requested by the Examiner to correctly reference page and line numbers and to correctly reference submission of Appendix A on a compact disc at the beginning of the specification. A compact disc containing one file is also submitted herewith. The Applicants have also amended the specification to correct minor typographical errors and grammatical inconsistencies.

Prior to entry of this Amendment and Response, claims 1-170 were pending. After entry of this Amendment and Response, claims 36-38, 42, 44-60, 96-99, 105-109, and 112-114 have been cancelled and claims 1-35, 39-41, 43, 61-95, 100-104, 110, 111 and 115-170 remain pending. Applicants assert that claims 36-38, 42, 44-60, 96-99, 105-109, and 112-114 have been cancelled from this application in order to reduce the burden upon the Examiner in examining the present application. Applicants further intend to prosecute claims 36-38, 42, 44-60, 96-99, 105-109, and 112-114 in a separate continuation application and the cancellation of such claims from the present application is not to be construed as being related in any manner to the rejection thereof based upon Palmer and/or any other reference.

Further, this Amendment and Response also amends claims 13 and 125. Applicants assert that the foregoing amendments to the specification and claims of the present application do not add any new matter to the present application and are being made in order to place the present application in a better form for allowance. As such, these amendments should not be construed as limiting the scope, literally and/or under the doctrine of equivalents, of any claim herein.

Rejection Under 35 U.S.C. 102(e)

The Examiner rejected claims 1, 4-35, 38-50, 52, 54-61, 64-111, 115, 117-130, 132-141, 143-156 and 158-170, under 35 U.S.C. 102(e), as being anticipated by United States Patent No. 5,905,865 which issued to Palmer et. al. (hereinafter, "the Palmer reference"). In responding to these rejections, Applicants' attorney, John T. Kennedy, conducted an interview with Examiner Viet Vu at the USPTO on Monday, November 4, 2002. Mr. Kennedy extends his gratitude to Examiner Vu for making time to meet and discuss the present application with him.

During this interview, Mr. Kennedy discussed with Examiner Vu the legal and factual bases for why the Palmer reference is not entitled to the filing date of U.S. provisional patent application serial number 60/008,111, which was filed on October 30, 1995, and upon which the Examiner relies in supporting the § 102(e) rejection (hereinafter, the "Palmer provisional"). These arguments are further set forth in greater detail hereinbelow. But, in short, Applicants respectfully traverse this rejection because, in accordance with 37 C.F.R. 1.78(a)(4) and/or other legal and factual bases, the Palmer reference is not entitled to the filing date of the Palmer

provisional because the Palmer provisional does not enable and/or set forth a written description of the invention claimed in the Palmer reference as required by 35 U.S.C. 112, ¶ 1 and other U.S. laws and/or regulations.

Additionally, Applicants respectfully submit that they have thoroughly reviewed the content of both the Palmer reference's specification and the Palmer provisional application's specification. Based upon this review and an analysis of applicable laws, regulations and case holdings, Applicants respectfully contend that since the portion of the Palmer reference cited by the Examiner to sustain his § 102(e) reference is *not* disclosed or even suggested by the provisional application, the Palmer reference is not entitled to claim the benefit of the filing date of the Palmer provisional for purpose of § 102(e).

The Requirements of 35 U.S.C. 102(e)

Applicants note that, the beforementioned claims were rejected under 35 U.S.C. 102(e) which provides that, "[a] person shall be entitled to a patent unless...(e) The invention was described in ... (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, ..." This section basically provides that in order for an applicant to receive a benefit of an earlier filing date the invention must be described in the earlier filed application. Applicants assert that the invention in a patent is identified by that which is claimed and that the specification section and/or the drawing figures in a patent application are not the invention and instead are provided to support the claimed invention. Thus, when determining whether a patent is entitled to a priority date for an earlier filed application, for purposes of being utilized as a prior art reference, the Examiner must determine whether the invention set forth in the claims are described and supported by the earlier filed application.

37 C.F.R. 1.78(a)(4) and 35 U.S.C. 112, ¶ 1

More specifically, the USPTO has adopted a regulatory scheme which is related to 35 U.S.C. 102(e). This regulatory scheme is set forth in 37 C.F.R. 1.78(a)(4) and further provides that in the case of a patent claiming priority to a provisional application, the provisional must satisfy the requirements of 35 U.S.C. §112, ¶1 for the claimed invention. More specifically, 37

C.F.R. 1.78(a)(4) provides that “[i]n order for an application to claim the benefit of [a] ... provisional application[s], [the] ... provisional application must... disclose the... invention claimed in at least one claim of the later-filed application in the manner provided by the first paragraph of 35 U.S.C. 112.” Further, 35 U.S.C. 112, ¶1 provides as follows:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention. (Underlining added)

Thus, in order to be granted the filing date of a provisional application, an invention claimed in a utility application must meet both the written description and enablement requirements *in the originally filed provisional application*. This prevents an inventor from filing a provisional application, drafting a claim in a utility application directed solely to new matter disclosed only in the utility application, and gaining the benefit of the earlier provisional filing date through a priority claim.

Obviously, the Examiner has not cited a claim in the Palmer reference against the present application, but instead a portion of the Palmer reference’s specification. Applicants assert that this reliance upon the Palmer reference’s specification as if it were in existence prior to March 8, 1996 (i.e., the earliest priority date of the present application) is improper given the Applicants’ showing (hereinbelow) that the Palmer provisional does not support the claims in the Palmer reference.

Further, a logical extension of the preceding analysis and discussion to the facts of the present application invariably provides that since an invention is disclosed, but not claimed, in the Palmer reference, § 102(e) does not permit backdating that portion of the reference’s specification to the filing date of the provisional application. To do so would be to aver that Palmer was not only in possession of the invention described in the Palmer reference’s specification at the time the Palmer provisional was filed, but also that the Palmer provisional

enabled the same invention. Insofar as the Palmer provisional makes no mention of the portion of the Palmer reference cited by the Examiner, this clearly cannot be the case. To afford all of the Palmer reference's specification the priority date of the Palmer provisional, regardless of whether it was disclosed therein, would exalt form over substance.

35 U.S.C. 119(e)

35 U.S.C. §119(e) is also relevant to the present discussion and governs priority claims to previously-filed provisional applications. This statute provides, in part:

An application for patent... for an invention disclosed in the manner provided by the first paragraph of section 112 of this title in a provisional application... shall have the same effect, as to such invention, as though filed on the date of the provisional application..., if the application for patent filed under section 111(a) or section 363 of this title is filed not later than 12 months after the date on which the provisional application was filed and if it contains or is amended to contain a specific reference to the provisional application. (Emphasis added.)

As can be seen from the quote above, §119(e) makes even clearer the fact that any invention seeking the filing date of a provisional application must be described and enabled in that provisional application. Again, the portion of the Palmer reference (in the words of §119(e), “the invention”) cited by the Examiner against the Applicants was not disclosed in the provisional application. Accordingly, any attempt to utilize the provisional application's filing date as the prior art date, for the invention set forth in the Palmer reference, violates 35 U.S.C. §119(e).

37 C.F.R. 1.53(b) - CIP to Parent Analogy

Essentially, the present situation is analogous to the filing of a continuation-in-part application under 37 C.F.R. §1.53(b). When a second utility application is filed claiming the benefit of an earlier, first utility application's filing date, but new matter is added thereto, the second utility application is designated as a “continuation-in-part” (or CIP) and is generally

afforded three separate filing dates. With respect to the matter disclosed in the first application, the second utility application is granted the earlier filing date as the date of invention. With respect to the new matter, however, the second utility application must stand by its own filing date and is not entitled to claim the earlier filing date as the date of invention. *See* 37 C.F.R. §1.53(b); MPEP 201.11. On this point, the Federal Circuit has held that “A CIP application can be entitled to different priority dates for different claims. Claims containing any matter introduced in the CIP are accorded the filing date of the CIP application. However, matter disclosed in the parent application is entitled to the benefit of the filing date of the parent application.” *Waldemar Link v. Osteonics Corp.*, 32 F.3d 556, (Fed. Cir. 1994) (referencing *Litton Sys., Inc. v. Whirlpool Corp.*, 728 F.2d 1423, 1438, 221 USPQ 97, 106 (Fed.Cir.1984)).

Third, as set forth in *Ex Parte Craig Heikes*, 2002 WL 31003035 (Bd. Pat.App & Interf.), a CIP is generally entitled to only the filing date of the CIP when a patent issuing from the CIP is later to be used as an invalidating prior art reference patent for purposes of a prior art rejection against another patent application. This general rule applies unless, the earlier filed application satisfies §§ 120/112 for the invention claimed in the reference patent (in which case the invention claimed could more properly be construed as a continuation rather than a CIP of the parent application(s)). More specifically, the Board in *Ex Parte Craig Heikes*, while interpreting § 102(e) in light of *In Re Wertheim*, 646 F.2d 527, 209 USPQ 554 (CCPA 1981), stated:

when a patent disclosure relies on one or more continuation-in-part applications in a chain of priority under 35 U.S.C. § 120, there must be a determination with respect to what effect the presentation of new matter has in the patent’s chain of priority -- whether the patent disclosure represents ‘secret prior art’ as to the application at issue, and is thus not effective as a reference. If... [the USPTO] wishes to utilize against an applicant a part of that patent disclosure found in an application filed earlier than the date of the application which became the patent, **[the USPTO] must demonstrate that the earlier - filed application contains §§ 120/112 support for the invention claimed in the reference**

patent.” (*Ex Parte Craig Heikes*, 2002 WL 31003035 (Bd. Pat.App & Interf. (emphasis added))).

Further, the Board has stated, “the determinative question is whether the invention claimed in the patent finds a supporting disclosure, in the patent’s application in question, in compliance with section 112, as required by section 120, so as to entitle that invention as ‘prior art’ to the filing date of the patent’s application. The only date a patent has under 102(e)(2) is the filing date of the application on which the patent issued. **‘Any earlier U.S. filing date for the patent necessarily depends on further compliance with §§120 and 112.’** *Wertheim*, 646 F.2d at 538, 209 USPQ at 565.” (*Ex Parte Craig Heikes*, at pg. *3 (emphasis in original)).

Applicants respectfully assert that the holding of *Ex Parte Craig Heikes* is also applicable to the present situation, because the Palmer reference is a *de facto* continuation-in-part of the Palmer provisional application. In short, Applicants object to the Examiner’s reliance, under 102(e), upon an earlier filed application (i.e., the Palmer provisional) which does not enable and/or provide a written description for the claims in a latter filed application (i.e., the Palmer reference). Applicants contend that the language set forth in 35 U.S.C. 119 is indistinguishable from the statutory language set forth in 35 U.S.C. 120. Therefore, absent controlling authority to the contrary, none of which the Applicants are aware, the holdings in *In Waldemar*, *In Re Wertheim*, *Ex Parte Craig Heikes* and other cases are applicable and controlling authority for the present situation.

MPEP § 2163(II)(3)(ii)(b)

The above arguments are also supported by the Manual of Patent Examination and Procedure (MPEP) § 2163(II)(3)(ii)(b) which requires each claim limitation to be expressly, implicitly or inherently supported by the disclosure. This section provides:

To comply with the written description requirement of 35 U.S.C. 112, para.1, or to be entitled to an earlier priority date or filing date under 35 U.S.C. 119, 120 or 365(c), each claim limitation must be expressly, implicitly or inherently supported in the originally filed disclosure. When an explicit limitation in a claim “is not present

in the written description whose benefit is sought it must be shown that a person of ordinary skill would have understood, at the time the patent application was filed, that the description requires that limitation.” (MPEP, pg. 2100-165).

Recent Analogous Federal Circuit Holdings under 35 U.S.C. 102(b)

Further, the above arguments are also further supported by the Federal Circuit’s recent decision in *New Railhead Manufacturing, L.L.C., v. Vermeer Manufacturing Company*, 298 F.3d 1290 (Fed. Cir. 2002), which by analogy is relevant to the present discussion. In *New Railhead*, the plaintiff owned a utility patent drawn to a drill bit for rock drills. The utility patent claimed priority to a provisional application. Although the provisional was filed less than one year prior to an offer for sale of the drill bit, the utility application was not. Accordingly, the provisional filing date was necessary to avoid an on-sale bar under §102(b).

While reviewing the district court’s opinion, the Federal Circuit held “the specification of the *provisional* must ‘contain a written description of the invention and the manner and process of making and using it, in such full, clear, concise, and exact terms,’ 35 U.S.C. §112 ¶1, to enable an ordinarily skilled artisan to practice the invention *claimed* in the *non-provisional* application.” *Id.* at 1294 (emphasis in original). The Federal Circuit further held that the claim limitation in question was not adequately supported by the provisional disclosure, because “the disclosure of the provisional application does not adequately support the invention claimed in the ‘283 patent ... the ‘283 patent is not entitled to the filing date of the provisional application.” (*Id.* at 1295). Accordingly, the claim was not afforded the provisional filing date, and was as a result invalid under 35 U.S.C. §102(b).

The same reasoning may be applied to the instant case. The Palmer reference includes a disclosure that, if not afforded the filing date of the Palmer provisional application, cannot serve as a reference against the present application. Since none of the claims in the Palmer reference are supported by the specification provided in the Palmer provisional, the Palmer reference cannot be afforded the provisional’s priority date. Accordingly, it is consonant with the Federal Circuit’s ruling in *New Railhead* to give the Palmer reference only the filing date of the reference itself. Thus, a proper interpretation of the law supports a finding that the Applicants’ priority

date predates the proper date of the Palmer reference. The Palmer reference therefore cannot be used as prior art under 35 U.S.C. §102(e) by the Examiner.

Summary of Legal Arguments

In summary, the preceding discussion of the applicable laws, regulations and case holdings establishes that only when the claimed invention in a reference patent is supported by a full written disclosure and enabled by an earlier-filed application can the reference patent claim the filing date of the earlier filed application for purposes of being available as a 35 U.S.C. 102(e) reference. Further, when any portion of an invention claimed in a United States patent is described for the first time in the patent itself, then the patent may only rely upon its own filing date for the purpose of being a 102(e) prior art reference.

The Palmer Reference Includes New Subject Matter

Applicants assert, among other things, that each and every claim in the Palmer reference contains new subject matter that is neither enabled nor described in the Palmer provisional. One example of such subject matter is the “central office” element. For example, upon comparison of the only figure (i.e., Figure 1) provided in the Palmer provisional against the only figure (i.e., Figure 1) of the Palmer reference, it is clear that element 70, the central office, is not present in the Palmer provisional and has been added as new subject matter in the Palmer reference. Further, substantial and significant additions of new subject matter have been added to the Palmer reference, which are not present in the Palmer provisional, to describe the role, features and functions of the central office. Applicants assert that this new matter irrefutably shows that Palmer et al. did not enable and/or describe a system and/or process which utilizes a central office. Examples of this new subject matter include:

- a) “**Central office 70** maintains contact with on-line service 60 via any electronic connection 71 such as the Internet or standard telephone lines. **Central office 70** maintains similar communication connections 72 and 83 with the pager and programming broadcasters 20 and 90, respectively. Preferably, the central office is another website. **Central office 70** is used to help coordinate the various activities of the components of the system. However, as many of these activities

may be planned in advance as shown below, **central office 70** is not necessary to implementation of the invention.” (Col. 4, Lines 40-51 (emphasis added)).

- b) “The request for the page may have originated from either the **central office 70** or from the radio/television broadcaster 90, with the page request being sent by telephone lines.” (Col. 4, Lines 53-56 (emphasis added)).
- c) “**Central office 70** coordinates the activities between paging system 20 and programming broadcaster 90. The radio and television stations may provide the **central office** with a schedule of programming and the associated URL's. In accordance with those schedules, the **central office** sends page requests to the paging system via the telephone lines or Internet at predetermined times. For any radio and television programming where it is difficult to predict when the ULR's should be simulcast with the broadcast programming, such as live broadcasts, the station 90 may send its URL page requests either to **central office 70** or directly to paging system 20 (as referenced by line 84 of FIG. 1) in relative synchronicity and real-time with the programming. Yet further, the station may inform the **central office** of what URL's should be paged by embedding the information right in its broadcast. For example, the URL may be embedded in the vertical blanking interval, sideband or alternative band or channel of the broadcast and extracted by the **central office 70**. ” (Col. 5, Lines 44-61 (emphasis added)).
- d) “In another preferred embodiment, the URL messages are not broadcast via a paging system but are instead sent over the Internet. For instance, the computer 40 uses a first web browser to connect with **central office 70** over the Internet, and receives a steady stream of URL locations from **central office 70**. These locations are provided to a second web browser running on computer 40 which connects with different websites as noted above. Thus, by running the first web browser connected to the **central office** in the background or "minimized", the second web browser will continuously update the screen with changing information.” (Col. 5, Line 63 to Col. 6, Line 6 (emphasis added)).

- e) “Alternatively, the profile may be stored at the **central office 70** and a page sent to only to those particular receivers and users which have indicated an interest in receiving the information. For example, **central office 70** may store a list of the receivers 30 which want certain information, so that the **central office** only sends pages to those particular receivers. Although all the receivers 30 might be physically capable of accepting the signal, not all will take the next step and make a connection with the associated on-line service.” (Col. 7, Lines 36-45 (emphasis added)).

In short, the concept of a “central office”, as set forth in the Palmer reference, is not described nor enabled by the Palmer provisional.

Each and Every Claim of the Palmer Reference Includes a Central Office

Applicants further contend that each and every claim in the Palmer reference includes the “central office” element. More specifically, independent claim 1 provides:

1. A method for connecting a computer with one or more on-line services providing information corresponding to audio or video programming being broadcasted comprising:
 - a) providing ...
 - c) receiving an address identifying said on-line service at an address transmitter from said programming transmitter or from a **central office**,
 - d) transmitting

Similarly, independent claims 17, 27, 33, 34 and 35 (i.e., each and every independent claim in the Palmer reference) include the “central office” element. In short, all of the independent claims and thus all of the dependent claims include the “central office” element. As such, none of the claims in the Palmer reference are enabled and/or supported by a written description, as required by 35 U.S.C. 112.

Summary of 102(e) Rejection

Accordingly, since the Palmer reference does not satisfy 35 U.S.C. 112 and other laws and regulations, none of the Palmer reference may be accorded the October 30, 1995 filing date of the Palmer provisional. Instead, the actual filing date of the Palmer reference itself- namely October 30, 1996- is the proper date to be used in determining whether the Palmer reference is available as a prior art reference under 35 U.S.C. 102(e) or otherwise.

Further, since the Applicants' priority date of March 8, 1996 predates the Palmer reference's proper October 30, 1996 priority date, Applicants respectfully submit that the Examiner's §102(e) rejection cannot be sustained and is improper. Accordingly, Applicants respectfully request the rejection be overturned and all of the currently pending claims be allowed.

Rejections Under 35 U.S.C. §103

The Examiner also rejected claims 2-3, 36-37, 62-63, and 112-114 under 35 U.S.C. §103(a) as being unpatentable over the Palmer reference. Further, the Examiner rejected claims 51 and 53 as unpatentable over the combination of the Palmer reference and United States Patent. No. 5,710,884 to Dedrick. Of these, claims 36, 37, 51, 53, and 112-114 have been cancelled from the present application, and such rejections have hereby been rendered moot with respect to the cancelled claims. Applicants respectfully submit that the remaining claims, i.e., claims 2, 3, 62 and 63, depend from independent claims for which it has been shown that the Palmer reference can not operate as a prior art reference. Accordingly, Applicants respectfully submit that these dependent claims are themselves patentable because, the Palmer reference is not a § 102(e) prior art reference and therefore can not be used to support any § 103 rejections.

Closing Remarks

Applicants contend that each and every pending claim in the present application is expressly, implicitly and/or inherently supported by the disclosure set forth in U.S. patent application serial number 08/615,143, now U.S. Patent No. 5,778,181, which was filed on March 14, 1996 and which claims priority to U.S. patent application serial number 08/613,144, which was filed on March 8, 1996. As such, Applicants contend that each and every claim pending in

the present application is entitled to claim priority to a filing date of as early as, if not earlier, March 14, 1996.

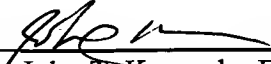
Additionally, although specific reference has been made above to certain subject matter that exists in each of the claims in the Palmer reference, it should be understood that these are by no means the only subject matter/elements contained within the various claims set forth in the Palmer reference which are not enabled and/or described in the Palmer provisional. Applicants respectfully suggest that other subject matter most likely exists in the various claims in the Palmer reference which are not supported by the Palmer provisional. As such, additional showings may be made, as necessary, to further establish that the Palmer reference is not entitled under 102(e) to claim priority to the filing date of the Palmer provisional.

Applicants, however, contend that they have met their burden of showing that a prima facie case does not exist and that the burden has now shifted to the Examiner to clearly show how each claimed invention in the Palmer reference is enabled and supported by a full, clear and concise written description in the Palmer provisional. Absent such showing, Applicants respectfully contend that the Palmer reference can not operate as an invalidating prior art reference, that the Examiner must withdraw the § 102(e) rejection, and that each and every pending claim in the present application is allowable over the prior art of record.

Last, the Applicants thank the Examiner for his thorough review of the claims in this application. In the event the Examiner has questions or comments and a telephone conversation would expedite resolution of same, the Applicants invite the Examiner to contact the undersigned attorney at (303) 260-6362.

Respectfully submitted,

Dated: November 7, 2002

By: 
John T. Kennedy, Esq.
Reg. No. 42,717
Dorsey & Whitney LLP
Customer No. 20686

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

The paragraph beginning on page 5, line 14, has been amended as follows:

The video programming and corresponding Internet pages can be viewed on personal computers equipped with a television card, but the open software-based approach enables anyone with a television set and JAVA [enables] enabled PC to experience the system of the invention.

The paragraph beginning on page 5, line 17 has been amended as follows:

By marrying the appeal of video with the two-way data transfer capabilities of the Internet, the system creates a powerful new medium[:]. Video producers and Internet site creators can enhance their content to extend their brand identity and differentiate their program offerings to the millions of people who are spending more time navigating through the resources of the World Wide Web rather than watching television; advertisers can speak more directly to consumers by directly sending Web pages to the consumer instead of only displaying Web addresses in their commercials; and consumers can gain a new level of interest and interactivity over a video-based medium. In addition to providing significant and immediate benefits to broadcasters and advertisers, the system will also present educational programmers with a way to more effectively use Internet resources in the classroom.

The paragraph beginning on page 8, line 22, has been amended as follows:

Figs. 7 and 8 are [is] a sample display provided to a student of a lesson.

The paragraph beginning on page 14, line 18, has been amended as follows:

In a preferred embodiment, a JAVA enabled browser 98 as well as specialized software 106 for performing part of the method of the present invention are installed on the computer 16. The JAVA enabled browser 98 allows the computer 16 to retrieve the Web pages 102 and is preferred software, since it is platform independent, and thus, enables efficient and flexible transfer of programs, images, etc., over the Internet 20. The specialized interface software 106 (hereinafter, "client software"), attached on one compact disc as Appendix A, acts as an interface

between the video programming and the Internet functions of the present invention. The client software 106 retrieves URLs from the video program (embodiment of Figure 1) or directly from the Internet connection (embodiments of Figures 2 and 4), interprets these URLs and directs the JAVA enabled browser 98 to retrieve the particular relevant Web pages 102, and synchronizes the retrieved Web pages to the video content for display on the user's computer 16, as shown in Figures 3 and 4 and explained in more detail below.

In the Claims:

13. A system as described in claim 1, wherein the programming signal is transmitted via at least one transmission medium[m] selected from the group consisting of: the Internet, an intranet, terrestrial broadcast, cable, satellite broadcast, fiber optics, a telephone circuit, a wireless connection, a private network, and a public network.

125. A system as described in claim 115[1], further comprising a computer on the network for creating at least certain ones of the on-line information segments retrievable from respective ones of the at least one server and storing the created on-line information segments at the respective ones of the at least one server, wherein at least one address for retrieving the created on-line information segments is provided to the address server for sending to the viewer in respective specified timing relationship with the video programming.

In the Abstract:

A system for integrating video programming with the vast information resources of the Internet. A computer-based system receives a video program with embedded uniform resource locators (URLs). The URLs, the effective addresses of locations or Web sites on the Internet, are interpreted by the system and direct the system to the Web site locations to retrieve related Web pages. Upon receipt of the Web pages by the system, the Web pages are synchronized to the

video content for display. The video program signal can be displayed [on] in a video window on a conventional personal computer screen. The actual retrieved Web pages are time stamped to also be displayed, on another portion of the display screen, when predetermined related video content is displayed in the video window. As an alternative, the computer-based system receives the URLs directly through an Internet connection, at times specified by TV broadcasters in advance. The system interprets the URLs and retrieves the appropriate Web pages. The Web pages are synchronized to the video content for display in conjunction with a television program being broadcast to the user at that time. This alternative system allows the URLs to be entered for live transmission to the user.

PATENT APPLICATION SERIAL NO. 60/008111

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
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1 314 75.00 OK SIF-3.3-002

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60/008411

AUTOMATIC ON-LINE ACCESS

OVERVIEW

The present invention ("the System") allows broadcasters and intercasters, including: AM & FM radio stations, television stations, cable systems, all other audio and video broadcasters, video playback system such as video cassettes, laser disc players, audio playback systems such as Compact Discs and mini discs and all other forms of digital or analog transmission to transmit alpha-numeric URL (Uniform Resource Locators) and Internet addresses as well as other computer data to a personal computer such as an IBM-PC or compatible, a Mac, Powermac or other computers equipped with the appropriate hardware and software.

Computers receiving transmitted addresses and other data can be automatically directed to advertiser or broadcaster specific sites on the World Wide Web, FTP's or other Internet sites in relative synchronicity to the broadcast signal.

The System includes both automatic & history stack browse modes and can bring all broadcasters & intercasters into the communication age by broadcasting Internet addresses to participating computers using FM subcarrier signals, television VBI codes or direct connections.

For any computer receiving transmitted addresses and other data, the System software can automatically or manually send a request that more information to be sent to the subscriber from the advertiser, promoter, broadcaster, or anyone generating the transmitted information sent to the subscriber.

An extensive profile request form, which is part of the System software, is created from the offerings of known content providers. This form may be dynamically updated electronically via the Internet or similar bi-directional

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electronic communication between a central site and the computers using the receivers and software of the inventions.

The user can specify the types of information by category or from the specific list of content providers available. For example, a user might want to be automatically entered in all contests, receive all coupon offers for laundry soap, or all information from a specific automobile advertiser.

The System may also transmit an automatic or manual request for additional information. This request can be a request for additional information in a variety of mediums including but not limited to: 1) electronic form by having the System software add the user's electronic mail address to a list server for a specific content provider whereby the user would receive periodic information without further action. An example would be the concert schedule of a musical group in a specific geographic area; 2) human form by having the software create an electronic mail message to be directed to a human for follow-up. An example would be an offer to have a salesperson call; 3) hard copy form by having the software create an electronic mail message to be directed to an appropriate party to have printed literature sent via mail or equivalent to the user's address; 4) electronic in the form of an executable program or data file that may contain audio, video, text, binary, or security key information by having the software create an electronic transfer request for the item to be retrieved from the content provider directed location.

The invention also has the ability for the user to create an order to purchase the offered product or service based on information provided by the content provider and the known information about the user from the user profile form. The user will enter relevant name, address, and method of payment information, along

with appropriate security authorization (i.e., a personal identification code) to initiate and/or finalize the transaction. The authorization code will be required each time to complete the transaction. Transactions processed through the System will provide the user with confirmation and optional cancellation instructions. All transmission of sensitive information may be made secure within the limits of the available technology and relevant National Security export regulations on encryption of data.

AN EXAMPLE OF HOW THE SYSTEM WORKS

In one embodiment, the broadcaster transmits an alpha-numeric message containing anAutoURL code over a common broadcast paging network or via FM subcarrier, RF or satellite slightly in advance of the broadcast programming. The computer program to transmit the Internet address is part of the System. If the System uses VBI video encoding, the signal can be synchronously broadcast with the television signals. Other means of broadcasting are also possible.

A plurality of receivers in accordance with the invention are attached to computers in the broadcast area: local, regional, nationwide or worldwide.

When a receiver receives an AutoURL transmission, the alpha-numeric data (usually a Web URL address) is stored in computer memory and an Internet browser will automatically contact the broadcasters desired Internet site. This allows a broadcaster to control the Internet destination of the receiver's computer. The receiving computer should have access to the Internet, either through a modem and POTS telephone line or by other means. The receiving computer user can either use their own Internet account or sign-on to a service associated with the invention.

USES

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1. Direct Response Selling - for example: taking users to specific web sites with radio broadcasts.
2. Coupon Distribution - for example: making special offer coupons available to users in sync with commercials.
3. Game Playing - for example: logging users on to interactive game play sites in sync with broadcasts.
4. Advertising - for example: making more complete information available to potential buyers.
5. Increasing or Controlling Internet traffic - for example: forcing users to log onto specific servers in response to specific commercials, programs or other broadcasts.
6. Adding Text, Graphics, QuickTime Movies and other computer-style information to radio and television broadcasts. - for example: creating a pseudo-television show out of a radio broadcast.
7. Linking the Broadcaster to the Internet. - for example: making radio a part of the explosive Internet marketplace.
8. Linking the Internet to broadcasters. - for example: making a text-based FTP site come alive with real-time broadcast radio or television.
9. Redefining Entertainment Programming - for example: adding Text, Graphics, QuickTime Movies and other computer-style information to existing programming.
10. Redefining Game Show Programming - for example: adding Text, Graphics, QuickTime Movies and other computer-style information to existing programming.
11. Adding Pictures to Radio Broadcasts - for example: pseudo-television through the relative synchronous performance of audio and World Wide Web (WWW) or Internet-based visuals on a PC.
12. Redefining Educational Programming/Polling & Political broadcasting - for example: using the WWW with a database-equipped server, programmers can ask questions and get answers and give results to users in relative sync with the broadcast performances.

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13. Order Entry/Creation - Ability for user to immediately place an order for the product or service being offered by the content provider with minimal effort. For example, a musical group offering their new CD record album in a special direct offer.

14. Hard Copy Literature Request - Ability for user to manually or automatically request information from a class of content providers or a specific content provider. For example, requesting a voter registration form or a brochure on an automobile.

15. Demographic Data Collection - With permission of the user, where applicable, detailed profile form information can be collected and summarized for the benefit of content providers. For example, how many people requested a class of information such as ALL automobile Mini-Van advertisers.

16. Grass Roots Activism - Organizations that issue "Call to Action" type messages or content can immediately reach users who have shown an interest based on the user profile form and/or the user's specific request for more information on the organization's needs and activities. (software ability to add a user to an electronic mail mailing list.)

17. Active Selling - Users can be directed to an "on-line" chat area to "type and talk" with a live salesperson about the specific offering. Where technology permits, an Internet Telephone Call can be created between the user and the content provider. (An Internet Telephone Call may require additional hardware although the System may be compatible with the existing available technologies for Internet Telephone Calls.)

THE HARDWARE TRANSMITTERS

In one embodiment, broadcasters need conventional access to a conventional alpha-numeric paging site in their broadcast area. This may be on their own sub-carrier or leased from a commercial paging company in the area. It may also be any RF transmitter or Satellite download station that is compatible.

Broadcasters should have a dedicated data link to the pager network.

At a predetermined interval, preferably prior to the broadcasting of affiliated on-air program material, the broadcaster will transmit a message to the paging system for broadcast over the paging system to compatible receivers.

WEBPAGER™ HARDWARE RECEIVERS

In one embodiment, the receiver may be FM receiver with a UART and asynchronous serial port operating at a baud rate compatible with most computer serial ports. The FM receiver is tunable via software so that numerous broadcasts can be tuned in. The receivers are also software keyed to receive numerous alpha-numeric messages on one or many specific frequencies so that one pager system can transmit for a plurality of broadcasters in a given broadcast area. The receiver downloads the alpha-numeric message to the computer. Technology for implementing a receiver capable of downloading pager information to a computer is well known in the art.

SOFTWARE RECEIVERS

In one embodiment, the software loads the address from the receiver and uses the address to connect with a service on the WWW (World Wide Web). The primary software resident in the receiver is a WWW compatible browser, such as Mosaic™ or Netscape™. The software may also be a TSR (Temporary Stay Resident) program which will work in conjunction with Web Browser software packages. The software may have two modes: Automatic & History Stack. These modes will be user settable and self-running.

HOW THE SOFTWARE WORKS

In one embodiment, the System software runs in the background on host computers. It is constantly looking at, for example, a user-selectable COM port for compatible alpha-numeric data. When the software sees an Internet address, it stores the address in memory and writes it to a file on the computer's hard drive. If the user is running the software in Auto-mode, the System instructs the Web

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Browser to go the specific URL. In history-stack mode, the URL is stored along with a brief description of the website.

The software also allows the user to interrupt the automatic address system at any time by clicking anywhere in a given Web page. This action automatically switches the software to history stack mode and allows the user to explore a preferred website. The user may switch back to Auto-mode at any time by clicking the appropriate icon.

THE HOME PAGE

In one embodiment, the URL's will preferably start at a home page licensed to the specific advertiser or broadcaster. This allows for concise auditing of "hit" activity from any given transmission.

The system can be completely advertiser driven such that fees are charged on a per-hit basis.

Other educational and non-profit uses exist for this technology.

MISCELLANEOUS

This technology might be made available free to consumers who want it. The hardware cost of an individual user site is expected to be relatively inexpensive.

Potential corporate uses of the technology include:

1. Advertisers
 2. Web Site Providers
 3. Software Companies
 4. Pager Companies
 5. Phone Companies
 6. Direct Response and Order/Literature Fulfillment
- Organizations
7. Demographic Data Users

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AN EXAMPLE OF HOW THE INVENTION MAY BE USED

Radio stations are being all but left out of the information revolution. As we enter the communication age, the lines separating telephones, televisions and computers are blurring. However, radio has still been an isolated broadcast source. The invention can be used to bring radio stations into the communication age and provide a brand new method of driving high volume WWW traffic.

Radio stations can simply broadcast compatible AutoURL's to compatible personal computers. When the users are running the System software in auto-mode, they will be automatically logged onto WWW sites that are associated with the specific radio broadcast that they are listening to. If they are running the System in history stack-mode, they will be collecting the URL's of the WWW sites that they have received during the broadcast along with a short description of the website for use in later visits from a saved "hot list".

This use by radio stations, which is a primary use of the System described above, allows synchronously linking radio broadcasts to WWW homepages.

The system can be 100% advertiser driven because a radio station sales force can sell "hits" on the web site as part of the advertising package. Anyone who has a website is a potential client. This is true for television advertisers as well.

A plurality of web servers with the home pages may be offered which combine radio station call letters and a primary advertising message and which link this homepage to a deeper, advertiser created and operated homepage on a central servers or on other servers. Pricing may be either by the number of "hits" an ad generates or by rating an average of "hits" over a given ratings period. There may also be a flat fee for setup and minimum guarantees for smaller advertisers.

SUMMARY OF THE INVENTION

A method is provided for directing a computer at a first location to communicate with an on-line service located at a second location remote to the first location. The method includes transmitting an address identifying the on-line service from a transmitter at a third location remote from the first and second locations and receiving the address at the computer, whereby the computer automatically accesses the on-line service by using the address.

Preferably, the transmitter also transmits audio and/or video information and the on-line service provides information related to the audio and/or video information to the computer while the computer is accessing the on-line service. The information provided by the on-line service may also change in synchronicity with the audio and/or video information.

The address may be a Universal Resource Locator of the Internet, and the step of automatically accessing the on-line service comprises the computer sending the address via telephone lines to connect with the on-line service. The on-line service at the address may also send information back to the computer via the telephone lines.

The address may identify a portion of the information available from the on-line service, and the step of connecting the computer to the on-line service may occur before the step of receiving.

Preferably, the method includes tracking the amount of times the computer accesses the on-line service and calculates a fee related to the amount of times.

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The transmitter may comprise any number of means, such as a pager network, a television or radio broadcast transmitter, or a video cassette or laser disk player.

Another embodiment of the invention includes a method of directing computers located at a plurality of different first locations to communicate with an on-line service, the on-line service being located at a second location remote from the first locations. This method includes transmitting an address from a transmitter at a third location to the plurality of the computers. The third location is remote from the first and second locations and the address identifies the on-line service. The method also includes simultaneously receiving the address at the plurality of computers whereby at least one of the computers uses the address to access the on-line service.

Preferably, the step of transmitting includes transmitting the address by modulating an electromagnetic wave which has a carrier frequency associated with television and radio signals. Audio and/or video information may also be transmitted at the same carrier frequency. The step of transmitting the audio and/or video information preferably occurs while the on-line service is providing information related to the audio and/or video information to the computer.

Alternatively, the method includes the steps of a station transmitting audio and/or video information at a different frequency than the address, and the on-line service providing information related to the audio and/or video information. The audio and/or video information may be provided to the computer before, during or after the step of accessing.

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The methods may also comprise the step of sending response information from the computer to the on-line service after the step of accessing. The response information may then be sent from the on-line service to the transmitter or station and any audio and/or video information modified in response to the response information.

The method preferably includes repeating the steps of transmitting and receiving with different addresses identifying different on-line services, and storing a plurality of the different addresses in the computer before the step of accessing.

Yet another embodiment of the invention includes a system for directing a computer located at a first location to access an on-line service. The system comprises an on-line service located at a second location remote to the first location and a transmitter located at a third location remote to the first and second locations and for transmitting an address identifying the on-line service. The computer receives the address and automatically accesses the on-line service by using the address.

Desirably, the computer includes a receiver for receiving the addresses which are transmitted via electromagnetic waves. The waves may be frequency modulated radio waves.

The computer preferably includes a modem for accessing the on-line service.

Yet a further embodiment of the invention is a method of directing a computer at a first location to communicate with a first on-line service identified by a first address and a second on-line service identified by a second address, each on-line service being located at a location remote from the first location. The method comprises transmitting the first address from a first transmitter located remotely

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from the computer and the on-line services, receiving the first address at the computer, transmitting the second address from a second transmitter located remotely from the computer and the on-line services, and receiving the second address at the computer, whereby the computer automatically accesses the first on-line service by using the first address and automatically accesses the second on-line service by using the second address. The first transmitter and second transmitter may be the same transmitter.

Yet another embodiment of the present invention comprises a method of directing a computer directing a computer to access information related to a radio or television broadcast. The method includes transmitting an address identifying an on-line service from a pager network and receiving the address at the computer. The computer then automatically accesses the on-line service by using the address, and receives information related to the radio or television broadcast. Preferably, the address is transmitted from the pager network shortly before or after the radio or television broadcast.

As used herein, the term "remote", in addition to its ordinary meaning, also means being separated by a distance which may be of any length. Yet, further, in all of the above embodiments, the transmitter and on-line service may be at the same location.

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